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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/666,323	09/19/2003	Thomas E. Creamer	BOC9-2003-0019 (388)	7911

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Gregory A. Nelson
Akerman Senterfitt
222 Lakeview Avenue, Fourth Floor
P.O. Box 3188
West Palm Beach, FL 33402-3188

EXAMINER	
DAILEY, THOMAS J	
ART UNIT	**PAPER NUMBER**
2152	

MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/666,323	CREAMER ET AL.	
	Examiner	Art Unit	
	Thomas J. Dailey	2152	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 September 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *6/04/2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-31 are pending in this application.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 11-31 are rejected under 35 U.S.C.101 because the claimed invention is directed to non-statutory subject matter.

4. Claims 11-15 are directed to "A system for validating data comprising..." and all the limitations are software elements (hosts, ghost agents, and a validation application). Therefore the claims are directed to functional descriptive material that is not embodied on a computer system which is non-statutory.

5. Claims 16-20 are directed to "A ghost agent comprising..." and all the limitations are software elements of a ghost agent. Therefore the claims are directed to functional descriptive material that is not embodied on a computer system which is non-statutory.

6. Claims 21-30 are directed to "A machine-readable storage" and "executable by a machine for causing the machine to..." This is considered non-statutory subject

matter and the examiner suggests the Applicant change the limitation to read "A computer readable storage medium" and "executed by a computer for causing the computer to..."

7. Claim 31 is directed to "A system for validating data comprising..." all the limitations are the limitations are software elements (hosts, means for associating, means for replicating, etc.). Therefore the claims are directed to functional descriptive material that is not embodied on a computer system which is non-statutory.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claims 1-12, 13-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boukobza et al (US Pat. 6,122,664), hereafter "Boukobza," in view of Putzolu et al (US Pat. 6,681,243), hereafter "Putzolu."

10. As to claim 1, Boukobza discloses a validation method comprising the steps of:

identifying a host within a grid environment, wherein said host is a software object (column 4, lines 64-67, "agents are installed...in the nodes to be monitored");

associating a ghost agent with said host (column 4, lines 64-67 and column 5, lines 13-18, "An autonomous agent SAA is chiefly composed of a generic agent GA related to specific modules SM");

replicating actions of said host within said ghost agent (column 6, lines 30-34, "log files of the actions of each node monitored");

comparing data related to said replicated actions with validation data (column 8, lines 44-50, "the 'log' files SL to be scanned and the 'critical errors' to be searched for" (if the 'log' (replicated actions) contains 'errors' the actions are not valid));

generating validation output based upon said comparing step (column 8, lines 53-63, "if the error is found, the action specified is called").

But, Boukobza does not disclose moving said ghost agent within said grid environment.

However, Putzolu discloses using mobile agents in a grid environment and such agents being applications to diagnose, report, or correct network conditions (column 3, lines 59-61 and column 4, lines 17-23).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Boukobza and Putzolu in order to create a validation method that utilizes mobile agents which allow for a decentralization of the method and allowing thereby allowing more effective management of the network (Putzolu, column 2, line 64-column 3, line 9).

11. As to claim 11, Boukobza discloses a system for validating data comprising:

a plurality of hosts, wherein said hosts are software objects distributed within a plurality of locations within a grid environment (column 4, lines 64-67);

at least one ghost agent associated with one of said hosts (column 4, lines 64-67 and column 5, lines 13-18), wherein said ghost agent is further configured to compare validation data with data relating to said associated host (column 8, lines 44-50); and,

a validation application configured to manage validation operations performed by said ghost agents. (column 8, lines 44-63)

But, Boukobza does not disclose moving said ghost agent within said grid environment.

However, Putzolu discloses using mobile agents in a grid environment and such agents being applications to diagnose, report, or correct network conditions (column 3, lines 59-61 and column 4, lines 17-23).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Boukobza and Putzolu in order to create a validation method that utilizes mobile agents which allow for a decentralization of the method and allowing thereby allowing more effective management of the network (Putzolu, column 2, line 64-column 3, line 9).

12. As to claim 16, Boukobza discloses a ghost agent comprising:

an interface for associating said ghost agent with a host (column 4, lines 64-67 and column 5, lines 13-18);

a validater configured to compare validation data with data relating to said host (column 8, lines 44-50); and,

a ghost controller for managing interactions between said ghost agent and a grid environment (column 5, lines 8-18).

But, Boukobza does not disclose moving said ghost agent within said grid environment.

However, Putzolu discloses using mobile agents in a grid environment and such agents being applications to diagnose, report, or correct network conditions (column 3, lines 59-61 and column 4, lines 17-23).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Boukobza and Putzolu in order to create a validation method that utilizes mobile agents which allow for a decentralization of the method and allowing thereby allowing more effective management of the network (Putzolu, column 2, line 64-column 3, line 9).

13. As to claims 21 and 31, they are rejected by the same rationale set forth in claim 1's rejection.

14. As to claims 2 and 22, Boukobza and Putzolu disclose the parent claims 1 and 21, and further disclose:

inputting at least one performance specification into said ghost agent, wherein said validation data comprises said performance specification (Boukobza, column 8, lines 44-67, the log is validated by the scan which uses parameters defined in column 5, lines 23-32); and,

determining at least one performance metric for at least one of said replicated actions, wherein said comparing step compares said performance metric with said performance specification (Boukobza, column 8, lines 44-67, parameters from the log are compared with wanted or expected values of parameters).

15. As to claims 3 and 23, Boukobza and Putzolu disclose the parent claims 1 and 21, and further disclose:

inputting at least one resource utilization specification into said ghost agent, wherein said validation data comprises said resource utilization specification (Boukobza, column 8, lines 44-67, the log is validated by the scan which uses parameters defined in column 5, lines 23-32); and,

determining at least one resource utilization metric for at least one of said replicated actions, wherein said comparing step compares said resource utilization metric with said resource utilization specification (Boukobza, column 8, lines 44-67, parameters from the log are compared with wanted or expected values of parameters).

16. As to claims 4 and 24, Boukobza and Putzolu disclose the parent claims 1 and 21, and further disclose:

inputting at least one load specification into said ghost agent, wherein said validation data comprises said load specification (Boukobza, column 8, lines 44-67, the log is validated by the scan which uses parameters defined in column 5, lines 23-32); and,

determining at least one load metric resulting from the execution of at least one of said replicated actions, wherein said comparing step compares said load metric with said load specification (Boukobza, column 8, lines 44-67, parameters from the log are compared with wanted or expected values of parameters).

17. As to claims 5, 14, 19 and 25, Boukobza and Putzolu disclose the parent claims 1, 11, 16, and 21, and further disclose:

executing a test routine (Boukobza, column 8, lines 44-67, the log is tested for errors via a scan);

generating test output for said test routine, wherein said validation data comprises said test output (Boukobza, column 8, lines 44-67); and,

determining output for at least one of said replicated actions, wherein said comparing step compares said replicated action output with said test output (Boukobza, column 8, lines 44-67).

18. As to claims 6 and 26, Boukobza and Putzolu disclose the parent claims 5 and 25, and further disclose inputting said test routine into said ghost agent (Boukobza, column 8, lines 44-67) and, executing said test routine within said ghost agent (Boukobza, column 8, lines 44-67).

19. As to claims 7, 12, and 27, Boukobza and Putzolu disclose the parent claims 1, 11, and 21, and further disclose moving said host within said grid environment (Putzolu, column 3, lines 59-61 and column 4, lines 17-23); and, responsively moving said ghost agent in accordance with movement of said host (Putzolu, column 3, lines 59-61 and column 4, lines 17-23).

20. As to claims 8 and 28, Boukobza and Putzolu disclose the parent claims 1 and 21, and further disclose identifying a location for recording validation output that is external to said ghost agent (Boukobza, column 8, lines 53-63, the action that is called is sent to "the object_id"); and, conveying said validation output to said identified location (Boukobza, column 8, lines 53-63).

21. As to claims 9 and 29, Boukobza and Putzolu disclose the parent claims 1 and 21, and further disclose determining whether said ghost agent satisfies validation criteria based upon said comparing step (Boukobza, column 8, lines 44-67); and, including a compliance indicator within said validation output based upon said determining step (Boukobza, column 8, lines 44-67, whether or not errors are found is the compliance indicator).

22. As to claims 10 and 30, Boukobza and Putzolu disclose the parent claims 1 and 21, and further disclose selecting a plurality of hosts; and, for each selected host, repeating said associating step, said replicating step, said comparing step, and said generating step (Boukobza, column 4, lines 36-39, "monitor n machines"; column 5, lines 13-18, "An autonomous agent SAA...specific to an object type).

23. As to claims 15 and 18, Boukobza and Putzolu disclose the parent claims 11 and 16, and further disclose a validation data store configured to record validation output generated by said ghost agents (Boukobza, column 8, lines 44-67).

24. As to claim 17, Boukobza and Putzolu disclose the parent claim 16, and further disclose a ghost identifier configured to identify said ghost agent to components within said grid environment (column 4, lines 64-67 and column 5, lines 13-18).

25. As to claim 20, Boukobza and Putzolu disclose the parent claim 16, and further disclose means for disassociating said ghost agent from said host; and, means for associating said ghost agent with a different host (Putzolu, column 3, lines 59-61, "Agents...may execute on device or environment, move to another device or operating environment, and resume execution").

26. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Boukobza in view of Putzolu as applied to claim 11 above, in further view of what is well known in the art.

27. As to claim 13, Boukobza and Putzolu disclose the parent claim 11, and although Boukobza and Putzolu does not explicitly suggest a validation interface configured to permit authorized users of said validation application to access features of said validation application Official Notice is taken (MPEP 2144.01) that restricting access to network management applications was a well-known in the art at the time of the applicant's invention was made, which is deployed to improve security and control for the administrator of the network. Thus it would

have been obvious to one of ordinary skill in the art at the time of the invention to take advantage of a known practice to modify the teachings of Boukobza and Putzolu in order to achieve such benefits.

Conclusion

28. For additional prior art made of record and not relied upon and considered pertinent to applicant's disclosure see attached Notice of References Cited, Form PTO-892.

29. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas J. Dailey whose telephone number is 571-270-1246. The examiner can normally be reached on Monday thru Friday; 9:00am - 5:00pm.

30. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bunjob Jaroenchonwanit can be reached on 571-272-3913. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

31. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TJD
5/2/2007

BUNJOB JARGENCHONWANIT
SUPERVISORY PATENT EXAMINER